UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,660	03/29/2004	Adrian P. Stephens	P-9630-US	3424

49444 7590 07/12/2010		EXAMINER
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ART UNIT	PAPER NUMBER
2467	

MAIL DATE	DELIVERY MODE
07/12/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04/19/2010*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-9,13-17,21-26,28-31,33 and 34* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-9,13-17,21-26,28-31,33 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All   b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment filed on 04/19/2010 has been entered and considered.

Claims 1, 5-9,13-17, 21-26, 28-31 and 33-34 are pending in this application.

Claims 2-4, 10-12, 18-20, 27 and 32 have been canceled.

Claims 1,5-9,13-17,21-26,28-31 and 33-34 remain rejected as discussed below.

Claim Objections

2.   Claims 1 and 5-6 are objected to because of the following informalities:

Claim 1 recites the limitation "said multicast schedule" in line 6 and the limitation

"the multicast delivery" in line 7 do not have refer back to the same terms. It is

suggested to change the terms to overcome the insufficient antecedent basis for these

limitations in the claim.

The limitation of claim 5 which recites that the deletion of the schedule is done

after the client receives the information contradicts with claim 1, since claim 1 recites

that the deletion of the schedule is done after the <u>last</u> client receives the information

(see also, Fig.2 steps 245-260). Similar issue occurs in claim 6 that recites the deletion

of the client device as a result of receiving deletion requests from other client devices

which contradicts with claim 1 and Fig.2 steps 245-260 that discloses the deletion of the

client device from the multicast schedule as a result of transmitting a deletion request by

the client device and not as claimed in claim 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Pecen et al (US 2005/0083961) in view of Benveniste (US 2005/0152324) and

Pung et al (US 2002/0150099) and Chuah et al (US 7,096,039).

For claim 1, Pecen discloses a method for multicasting in a wireless network (see

Figure 1) comprising: receiving a client device (see Fig.1; plurality of mobile stations

114), a request for delivery of information requested by a client application (see Figure 2

box 204; wherein the user sends a request); updating said multicast schedule or

creating a coordinated multicast schedule (see Figure 2 box 206; wherein storing record

of mobile device requesting multicast which means making a list of the devices

participating in the multicast implies that there is no multicast schedule exists for the

request); sending the information to the requesting client device according to the

coordinated multicast schedule (see Figure 2 box 212 and [0026]; wherein the base

station of Figure 1 element 112 sends the multicast data).

Pecen discloses all the subject matter with the exception of configuring a power

saving protocol to coordinate a scheduled delivery of the application data packets so

that the client device will be awake when the multicast delivery occurs. However,

Benveniste discloses a method that schedules the delivery of the packets according to a

power saving protocol to coordinate a scheduled delivery of the application data packets

so that the client device will be awake when the multicast delivery occurs by the use of

APSD (automatic power saving delivery) (see [0008] lines 11-14; [0032] lines 1-8;

[0038] lines 1-4). Thus, it would have been obvious to the one ordinary skill in the art at

the time of the invention to use the method of delivering packets as taught by the

invention of Benveniste into the invention of Pecen to increase battery life of the

wireless devices by reducing the time the devices spend in the Awake state.

Pecen in view of Benveniste discloses all the subject matter with the exception of

explicitly disclosing wherein the request includes an address for the source of

information and a quality of service (QoS) attribute. However, Pung discloses a method

in communication networks wherein the request includes an address for the source of

information and a quality of service (QoS) attribute (see the fields of the request in

Figure 4A; the source_root (address) and the QoS and at least claim 1; request

including an identifier of a multicast source and QoS). Thus, it would have been

obvious to the one ordinary skill in the art at time of the invention to use the request as

taught by the invention of Pung into the invention of Pecen in view of Benveniste for the

purpose of identification of the source and satisfaction of quality of service constraints.

Pung further discloses the deletion of the requesting device address from the multicast

group (see [0079]).

Pecen in view of Benveniste and Pung discloses all the subject matter with the

exception of explicitly disclosing the receiving of a request for deleting the multicast

schedule from a last client associated with the multicast schedule and deleting the

multicast schedule. However, Chuah discloses a method wherein each client needs to send a deletion message or a membership addition message to update the routing table and to know how many packets to be duplicated (see column 6 lines 23-27), and it is clear that when the last client leaves the multicast group, a person of ordinary skill in the art will recognize the need of deleting the multicast group (schedule) to avoid wasting space in the memory of the routing table. Thus, it would have been obvious to the one ordinary skill in the art at the time of the invention to use the method of updating the routing table by sending deletion messages as taught by the invention of Chuah into the invention of Pecen in view of Benveniste and Pung for the purpose of updating the addresses and saving memory space.

For claim 5, Pecen discloses a method further comprising: deleting the multicast schedule after the client device associated with the multicast schedule have been sent the information (see Figure 2 box "stop" the end of the cycle requires the start of a new cycle by deleting the previous multicast schedule after sending the multicast media and starting new one if requested). Moreover, Chuah discloses a method wherein each client needs to send a deletion message or a membership addition message to update the routing table and to know how many packets to be duplicated (see column 6 lines 23-27).

For claim 6, Chuah discloses a method wherein each client needs to send a deletion message or a membership addition message to update the routing table and to know how many packets to be duplicated (see column 6 lines 23-27), and it is clear that when the last client leaves the multicast group, a person of ordinary skill in the art will

recognize the need of deleting the multicast group (schedule) to avoid wasting space in the memory of the routing table.

For claim 7, Benveniste discloses a method in wlan complies with IEEE 802.11 (a) and (g) standards (see [0003]; IEEE 802.11 which is a standard that includes (a), (b) and (g) and see Figure 1 and paragraph 0028) and wherein a request comprises a transmission specification (TSPEC) request (see paragraph 0032; station submits a TSPEC request) and Pung further discloses wherein the request includes a multicast address and a quality of service (QoS) attribute (see the fields of the request in Figure 4A; the multicast ID (MT-ID) and the QOS).

For claim 8, Pecen discloses a method comprising: sending a response that confirms a scheduled delivery of the information to an application layer (see Figure 2 box 208 and paragraph 0024; wherein a signaling message is sent to clients (an application layer) to confirm the scheduling which includes TMGI and/or see Figure 2 box 210 and [0025]; notify device (an application layer) that multicast is about to start) wherein the response comprises a TSPEC response (see Figure 2 box 10 and paragraph 0026; wherein the clients that requested the multicast configures itself to receive the multicast data in response to signaling message; implicitly the signaling message comprises of traffic specification (TSPEC)).

4.   Claims 9, 13-15, 17, 22-26, 28-31, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecen in view of Benveniste and Pung et al.

For claims 9 and 24, Pecen discloses a method of receiving information in a wireless network by a client device (see Figure 1), the method comprising: sending a

request for delivery of the information (See Figure 2 box 204; request for multicast);

receiving a response that confirms a scheduled delivery of the information to an

application layer (see Figure 2 box 208 and paragraph 0024; wherein a signaling

message is sent to clients (an application layer) to confirm the scheduling which

includes TMGI and/or see Figure 2 box 210 and [0025]; notify device (an application

layer) that multicast is about to start); and receiving the information according to the

scheduled delivery (see Figure 2 box 212 and [0026]; wherein the base station of Figure

1 element 112 sends the multicast data).

Pecen discloses all the subject matter with the exception of configuring a power

saving protocol to accommodate/coordinate with a scheduled delivery of the information

based on the response to Awake state. However, Benveniste discloses a method that

schedules the delivery of the packets according to a power saving protocol to

accommodate a scheduled delivery of the information by the use of APSD (automatic

power saving delivery) (see [0008] lines 11-14; [0032] lines 1-8; [0038] lines 1-4). Thus,

it would have been obvious to the one skill in the art at the time of the invention to use

the method of delivering packets as taught by the invention of Benveniste into the

invention of Pecen to increase battery life of the wireless devices.

Pecen in view of Benveniste discloses all the subject matter with the exception of

explicitly disclosing wherein the request includes an address for the source of

information and a quality of service (QoS) attribute. However, Pung discloses a method

in communication networks wherein the request includes an address for the source of

information and a quality of service (QoS) attribute (see the fields of the request in

Figure 4A; the source_root (address) and the QoS and at least claim 1; request

including an identifier of a multicast source and QoS). Thus, it would have been

obvious to the one skill in the art at time of the invention to use the request as taught by

the invention of Pung into the invention of Pecen in view of Benveniste for the purpose

of identification of the source and satisfaction of quality of service constraints.

For claims 13, 26 and 34, Benveniste discloses a method wherein the wireless

network comprises a wireless local area network (WLAN) complying with IEEE 802.11

standard (see [0003]; IEEE 802.11 which is a standard that includes (a), (b) and (g) and

see Figure 1 which uses WLAN).

For claim 14, Benveniste discloses the use of WLAN which is by definition links

devices via a wireless distribution method (typically spread-spectrum or OFDM radio)).

Pecen in view of Benveniste and Pung does not explicitly mention the use of OFDM.

However, an official notice is taken in that OFDM can be used since OFDM is a digital

multi-carrier modulation scheme. Thus, it would have been obvious to the one skill in

the art at the time of the invention to use OFDM as a modulation scheme for the

purpose of increasing the adaptation to severe channel conditions without complex

equalization.

For claim 15 and 33, Benveniste discloses a method in wlan complies with IEEE

802.11 (a) and (g) standards (see [0003]; IEEE 802.11 which is a standard that includes

(a), (b) and (g) and see Figure 1 and paragraph 0028) and wherein a request comprises

a transmission specification (TSPEC) request (see paragraph 0032; station submits a

TSPEC request).

Claim 17 is rejected for same reasons as claim 9 since claim 17 is the apparatus that performs the method of claim 9. Furthermore, Benveniste discloses an apparatus further comprising: a radio frequency (RF) interface coupled to the processing circuit (See figure 1; the use of RF interface coupled to the processing circuit).

For claim 22, Pecen discloses an apparatus wherein the apparatus comprises a wireless user station (STA) (see Figure 1 elements 114) and a network adaptor (See Figure 2 element 210).

For claim 23, Pecen in view of Benveniste and Pung discloses all the subject matter with the exception of explicitly showing that the apparatus further comprising at least two antennas coupled to the RF interface. However, an official notice is taken in that Pecen stations (Figure 1) and Benveniste stations (Fig.1) can have plurality of antennas that can be used to implement MIMO transmission, since MIMO is the use of multiple antennas to improve communication performance by taking advantage of higher spectral efficiency (more bits per second per hertz of bandwidth) and link reliability or diversity as opposite of SISO. Thus, it would have been obvious to the one skill in the art at the time of the invention to use the MIMO transmission as opposite of SISO by having a plurality of antennas for the purpose of increasing in data throughput and link range without additional bandwidth or transmit power.

For claim 25, Benveniste discloses an apparatus further comprising: a radio frequency (RF) interface coupled to the processing circuit (See figure 1; the use of RF interface coupled to the processing circuit for receiving/transmitting).

For claim 28, Pecen discloses an apparatus wherein the processing circuit is to

send the schedule to one or more requesting network devices as a transmission

specification (TSPEC) response (see Figure 2 box 10 and paragraph 0026; wherein the

clients that requested the multicast configures itself to receive the multicast data in

response to signaling message; inherently the signaling message comprises of traffic

specification (TSPEC)).

For claim 29, Pecen discloses an apparatus wherein the processing circuit is

configured to buffer the information for the wireless multicast until a time indicated on

the multicast schedule (see Figure 2 Block 212; ending the multicast media and the last

block "stop"; at the end of the schedule of delivering the multicast which can be based

on time of the schedule).

For claim 30, Pecen in view of Benveniste discloses all the subject matter with

the exception of explicitly disclosing at least two antennas coupled to the RF interfaces

for enabling multiple input multiple output (MIMO). However, an official notice is taken

in that Pecen stations (Figure 1; 114 and/or 112) and/or Benveniste stations (Fig.1; 14

and/or 12) can have plurality of antennas that can be used to implement MIMO

transmission, since MIMO is the use of multiple antennas at both the transmitter and

receiver to improve communication performance by taking advantage of higher spectral

efficiency (more bits per second per hertz of bandwidth) and link reliability or diversity as

opposite of SISO. Thus, it would have been obvious to the one skill in the art at the

time of the invention to use the MIMO transmission as opposite of SISO for the purpose

of increasing in data throughput and link range without additional bandwidth or transmit

power.

Claim 31 is rejected for same reasons as claims 24-25 and 30.

5.   Claim 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Pecen in view of Benveniste and Pung et al and further in view of Chuah et al (US

7,096,039).

For claims 16 and 21, Pung further discloses the deletion of the requesting

device address from the multicast group (see [0079]). Pecen in view of Benveniste and

Pung discloses all the subject matter with the exception of wherein deleting the

multicast schedule comprises receiving a deletion request from each client associated

with the multicast schedule to delete the multicast schedule. However, Chuah discloses

a method wherein each client needs to send a deletion message or a membership

addition message to update the routing table and to know how many packets to be

duplicated (see column 6 lines 23-27). Thus, it would have been obvious to the one skill

in the art at the time of the invention to use the method of updating the routing table by

sending deletion messages as taught by the invention of Chuah into the invention of

Pecen in view of Benveniste and Pung for the purpose of updating the addresses.

Response to Argument

6.   Applicant's arguments filed have been fully considered but they are not

persuasive.

The applicant is arguing the 103 rejection (see Remarks pages 8-11). Thus, in

response to applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA

1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Moreover,

the applicant is stating in page 8 of the Remarks, that Benveniste discloses a power

saving scheme in WLAN but not multicasting. The examiner agrees since Pecen is the

one who teaches multicasting (if Benveniste teaches multicasting as well, the rejection

would have been 102 rejection (anticipation) and not 103 (obviousness) rejection (see

the rejection above)). Therefore, the claims are rejected under 103 for obviousness. In

addition, the test for obviousness is not whether the features of a secondary reference

may be bodily incorporated into the structure of the primary reference; nor is it that the

claimed invention must be expressly suggested in any one or all of the references.

Rather, the test is what the combined teachings of the references would have

suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981). Furthermore, Examiner notes that the Remarks lack

arguments in regard of the argued limitation since the Applicant did not discuss the

references applied against the claims, explaining how the claims avoid the references or

distinguish from them. Finally, Pecen discloses a method for multicasting in a wireless

network (see Figure 1) comprising: receiving a client device (see Fig.1; plurality of

mobile stations 114), a request for delivery of information requested by a client

application (see Figure 2 box 204; wherein the user sends a request); updating said

multicast schedule or creating a coordinated multicast schedule (see Figure 2 box 206;

wherein storing record of mobile device requesting multicast which means making a list

of the devices participating in the multicast implies that there is no multicast schedule

exists for the request); sending the information to the requesting client device according

to the coordinated multicast schedule (see Figure 2 box 212 and [0026]; wherein the

base station of Figure 1 element 112 sends the multicast data). Pecen discloses all the

subject matter with the exception of configuring a power saving protocol to coordinate a

scheduled delivery of the application data packets so that the client device will be

awake when the multicast delivery occurs. However, Benveniste discloses a method

that schedules the delivery of the packets according to a power saving protocol to

coordinate a scheduled delivery of the application data packets so that the client device

will be awake when the multicast delivery occurs by the use of APSD (automatic power

saving delivery) (see [0008] lines 11-14; [0032] lines 1-8; [0038] lines 1-4). Thus, it

would have been obvious to the one ordinary skill in the art at the time of the invention

to use the method of delivering packets as taught by the invention of Benveniste into the

invention of Pecen to increase battery life of the wireless devices by reducing the time

the devices spend in the Awake state.

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

8.   **Examiner's Note**: Examiner has cited particular columns and line numbers in the

references applied to the claims above for the convenience of the applicant. Although

the specified citations are representative of the teachings of the art and are applied to

specific limitations within the individual claim, other passages and figures may apply as

well. It is respectfully requested from the applicant in preparing responses, to fully

consider the references in entirety as potentially teaching all or part of the claimed

invention, as well as the context of the passage as taught by the prior art or disclosed

by the Examiner. In the case of amending the claimed invention, Applicant is

respectfully requested to indicate the portion(s) of the specification which dictate(s) the

structure relied on for proper interpretation and also to verify and ascertain the metes

and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out

the patentable novelty which they think the claims present in view of the state of the art

disclosed by the references cited or the objections made. Applicants must also show

how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In

addition, applicants are advised to provide the examiner with the line numbers and

pages numbers in the application and/or references cited to assist examiner in locating

the appropriate paragraphs.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to HICHAM B. FOUD whose telephone number is (571)270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST.
         If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj, Kumar can be reached on 571-272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
         Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. B. F./
Examiner, Art Unit 2467
07/01/2010

/Pankaj Kumar/

Supervisory Patent Examiner, Art Unit 2467